CLAIMS

1. A process of automatic control of the thrust of at least one engine (2) of an aircraft during a phase of horizontal flight at stabilized speed, according to which process the thrust of the engine (2) is controlled by applying a control value thereto which corresponds to the value of a predetermined control parameter representative of the rating of said engine (2), and according to which the following set of steps is carried out automatically and repeatedly:

a) an actual speed corresponding to the actual value of the speed of the aircraft is measured;

b) a preset reference speed corresponding to the speed of the aircraft, representative of the control value obtained from the previous set of steps, is determined;

c) a first difference between said actual speed and said preset speed is calculated;

d) an intermediate term dependent on said first difference is determined for said control parameter, said intermediate term making it possible to obtain a corrector term;

e) the sum is computed of said corrector term and of an equilibrium term which produces an equilibrium rating of the engine (2) in the absence of disturbances so as to obtain said control value; and

f) the control value thus obtained is applied to said engine,

wherein in step d):

- a second difference between said intermediate term of the present set of steps and the corrector term of the previous set of steps is calculated;
- this second difference is compared with a predetermined threshold value; and

- one selects as corrector term for the present set of steps, that is used in particular in step e):
  - . said intermediate term of the present set of steps, if said second difference is greater than said threshold value; and
  - . said corrector term of the previous set of steps, if said second difference is less than or equal to said threshold value.

2. The process as claimed in claim 1, wherein said selected corrector term is filtered before using it in step e).

3. The process as claimed in claim 1, wherein said predetermined control parameter is the speed of rotation of the engine (2).

4. The process as claimed in claim 3, wherein said threshold value is equal to 0.5% of the preset value of the speed of rotation of the engine (2).

5. The process as claimed in claim 3, wherein in step d), said intermediate term is determined by computing the sum:
- of a first term which is proportional to said first difference; and
- of a second term which:
  - . corresponds to the integration of said first difference, if said first difference is greater than a predetermined value and if said actual speed does not diverge from said preset speed; and
  - . is equal to zero, if at least one of the above conditions is not satisfied.

6. The process as claimed in claim 1,

wherein said predetermined control parameter is the engine pressure ratio of said engine (2).

7. Method of control of the thrust of at least one engine (2) of an aircraft during a phase of horizontal flight at stabilized speed, said method comprising at least one first process of control of thrust,
which method moreover comprises a second process of control of thrust, wherein said second control process corresponds to the process specified under claim 1, wherein account is taken of the results of said first control process under normal operation, and wherein one automatically switches into said second control process so as to take account of the results of the latter when at least one of a plurality of predetermined conditions is satisfied.

8. The method as claimed in claim 7,
wherein said predetermined conditions comprise at least the following conditions:
- the actual speed is stabilized, being to within a predetermined value, equal to the preset speed;
- the conditions of calculation of said equilibrium term are valid;
- an autothrust function of the aircraft is engaged in speed holding mode; and
- an automatic pilot of the aircraft is active in altitude holding mode.

9. A device for controlling the thrust of at least one engine (2) of an aircraft during a phase of horizontal flight at stabilized speed, said device (1) comprising:
- means (15) for measuring an actual speed corresponding to the actual value of the speed of the aircraft;

- means (14) for determining a preset speed corresponding to the aircraft's speed representative of a control value;
- means (13) for calculating a first difference between said actual speed and said preset speed;
- means (16, 17, 18, 19, 20, 21, 22, 23) for determining, for a control parameter, an intermediate term dependent on said first difference, said intermediate term making it possible to obtain a corrector term;
- means (10) for computing the sum of said corrector term and of an equilibrium term which produces an equilibrium rating of the engine (2) in the absence of disturbances so as to obtain a control value; and
- means (4) for applying the control value thus obtained to said engine (2),

which device moreover comprises:

- means (25) for calculating a second difference between said intermediate term and a previously recorded corrector term;
- means (26) for comparing this second difference with a predetermined threshold value;
- means (27) for selecting as corrector term:
  . said intermediate term, if said second difference is greater than said threshold value; and
  . said previously recorded corrector term, if said second difference is less than or equal to said threshold value; and
- means (29) for recording the selected corrector term.